ENTTEC

Quick Start Manual
MANUAL-PLAYBACK-MK2

for more information visit:
enttec.com/dmxplayback

DMX Playback Mk2

DMXPLAYBACK MK2

USER MANUAL

Box Contents

- DMXPlayBack Mk2 (70014)
- DB9 to DB9 1.8m cable (79103)
- Rack mount ears (79105)
- Power Adapter (79111)
- This user manual

Features

- Full DMX universe (512 channel) of input and output
- Scene capture from the DMX512 input
- Up to 12 Shows
- Up to 65,535 Scenes
- Up to 65,535 Scenes per Show
- Fade times and delay times (0 to 100 minutes in 0.1sec steps)
- DMX512 data compression to optimise memory usage
- Data stored indefinitely in non-volatile flash memory
- Fully compliant with USITT DMX512-A
- Show replay can be triggered on:
  - power up
  - DMXPlayBackRemote
  - external switch closure
  - remote serial command
- Internal auto-ranging power supply
- 1500 V full isolation

Safety

- Do not expose the unit to rain or moisture, doing this will void the warranty
- Do not remove the cover, there are no serviceable parts inside
- This unit is intended for indoor use only
- Wherever possible, use certified DMX cables for better reliability.

Basic Setup

The DMXPlayBack MK2 is a DMX512 recording and playback tool that captures snapshots of the lighting scenes produced by a control system. The DMXPlayBack then plays the captured scenes back in any desired sequence or combination, with selected scene fade in/out times and pauses between each scene.

The ShowEditor software controls and configures the DMXPlayBack. It can be used to modify the recorded scenes or to build entire new lighting scenes. In addition to setting up and loading show sequences, ShowEditor can configure DMXPlayBack for either remote control or stand-alone operation.
ShowEditor allows you to store a library of shows in a database on your computer or on removable media.
To record and replay a show on a DMXPlayBack Mk2:

- Install and configure the ShowEditor software on you Windows™ computer.

- Connect the DMXPlayBack to your computer, a power supply and the DMX512 control network.
- Capture and edit the lighting scenes from your presentation.
- Build a show from the scenes.
- Download the show to the DMXPlayBack
- Configure the triggering options on the DMXPlayBack
- Trigger your show.
- Watch it run.

Layout

The DMXPlayBack MK2 case is 1 Rack Unit (44.45mm) in height, 241mm (9.5 inches) wide and 105mm deep. Two devices of this size can be mounted side-by-side in a standard 19 inch equipment rack using the optional Rack Mounting Kit available separately.

1. LCD status display window: Indicates operational status and Show information.
2. DB9 RS-232 socket: Serial data connector for programming and control.
3. Power switch: Press to power on the unit, and depress to turn it off.
4. Power input socket (2.1mm): Accepts AC or DC inputs in the range 7V – 16V and a minimum current of 200mA.
5. XLR 5pin Female DMX512 Output. Connects to your DMX512 network of fixtures, dimmers, etc.
6. XLR 5pin Male DMX512 Input. Connects to a DMX512 lighting controller. (Pin 4 is used for the remote switch function)

Installing ShowEditor

Please download the latest version of ShowEditor from enttec.com/dmxplayback.
To install ShowEditor for Windows™, double-click on the downloaded installer file and accept the default program folder "C:\Program Files\ShowEditor MK2" or enter the location of your preferred folder.

A ShowEditor folder will now be found in the Programs list available from the Windows Start button.
In that folder there will now be a ShowEditor icon. By right-clicking on this icon and selecting Send to, then Desktop, a shortcut for ShowEditor will be created on your Windows desktop.

It is preferable to have the DMXPlayBack linked to the computer before launching ShowEditor.

Connecting DMXPlayBack Mk2

Power supply

The DMXPlayBack requires a low voltage supply (nominally 7.5V DC) from the included power pack unit. This should be plugged in to an appropriate mains outlet and the Power Supply socket on the back of the DMXPlayBack.
The DMXPlayBack must be connected to the power supply and switched on before attempting to establish DMX512 or Serial Data links.

RS232

The DMXPlayBack is controlled and configured through an RS232 serial link to a computer running the ShowEditor software. The supplied serial data cable can be used to connect the RS232 socket on the DMXPlayBack to the serial port on the ShowEditor computer. It is advisable to keep a record of which serial port has been used.
If there are no serial ports on the ShowEditor computer, it is possible to use a USB to RS232 adaptor to make the connection. Most varieties of adaptor work reliably, most of the time. Those based on FTDI's USB chip have proven to be the most stable. Be sure to install the adaptor and its driver software exactly as described in the product documentation.
Due to the wide variety of USB to RS232 adaptors available, ENTTEC are unable to offer technical support for these devices when used with DMXPlayBack MK2.

DMX OUT

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Quick Start Manual
MANUAL-PLAYBACK-MK2

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The DMX Out socket is connected to the network of DMX512 devices that are to be controlled by the DMXPlayBack MK2.
It is not necessary to have any connection to the DMX Out socket while programming the DMXPlayBack.

DMX IN

The DMX In socket is connected to the DMX512 controller whose output is to be captured by the DMXPlayBack.
It is not necessary to have any connection to the DMX In socket while playing back Shows from the DMXPlayBack.

Powering up the DMXPlayBack MK2

When the DMXPlayBack is switched on, the backlight on the LCD status display illuminates, and after a short pause for an internal system test, the Startup Frame will be output, and the LCD window will briefly display a message similar to:

```
DMXPlayBack MK2
DPMK2  V0.7
```

The version number VX.X indicates the version of firmware (internal operating software) installed.

If nothing is configured to run at Startup, the number of Shows currently stored in DMXPlayBack's memory will be displayed on the LCD.

```
0 shows in mem
```

If there is a Show in memory configured to run at Startup, the LCD will then display the name of the running Show.

Connecting ShowEditor to DMXPlayBack Mk2

When ShowEditor is launched, it attempts to contact a DMXPlayBack over the selected RS232 serial link. The first time ShowEditor is run, it tries to connect via COM 1. If it succeeds, the *On Line* button will be selected and the status window will display information about the version of firmware installed in the DMXPlayBack.

If ShowEditor is unable to connect to a DMXPlayBack the *On Line* button will not be selected and an error message will be displayed in the status window.

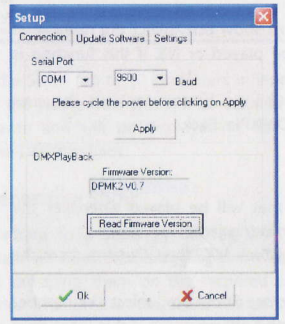
To configure communications between ShowEditor and the DMXPlayBack, select *Setup* from the main program menu. In the *Setup* window, select which Serial Port is connected to the DMXPlayBack and what data rate (in Baud) should be used.

While a higher data rate will make uploads and downloads faster, the default speed of *9600* Baud is the most reliable. If communications at higher speeds become intermittent, it is advisable to reduce the baud rate to *9600* Baud, and switch the DMXPlayBack off, then on again, to re synchronize the link.

Testing the RS232 link

To confirm that there is a working data link to the DMXPlayBack, click on the *Read Firmware Version* button.

Setting up DMXPlayBack Mk2



DMX Startup frame

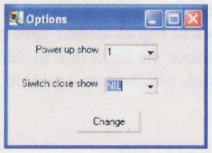
On Startup the DMXPlayBack continuously outputs a specific Startup Scene, unless it is configured to automatically run a Show.

To set the Startup Scene:

- Select the required Scene from either the Show or Scene Database window for display in the DMX Output window.
- Modify the Scene, if necessary, by selecting the channels in the DMX Output window to set new levels.
- Select *DMXPlayBack MK2* then *Set Startup frame*, from the main ShowEditor menu.

The current contents of the *DMX Output* window are copied to the Startup frame of the DMXPlayBack. The status of the transfer is indicated by a progress bar that will appear in the bottom of the Status window.

Show Replay Options



DMXPlayBack Mk2 can be configured to play a specific Show automatically whenever it is powered up. It can also be set up to play back a specific Show every time an external switch is closed.

Power up Show

To set the Show file that will be played whenever the DMXPlayBack is switched on:

- Select *DMXPlayBack MK2* then *Options*, from the main menu.
- In the *Power up* Show box, select the number of the Show to be played or NIL if this function is not required.
- Click on the Change button to send the new setting to the DMXPlayBack.

Switch Close Show

To set the Show file that will be played whenever the external switch function is triggered:

- Select *DMXPlayBack MK2* then *Options*, from the main menu.
- In the *Switch close* Show box, select the number of the Show to be played or NIL if this function is not required.
- Click on the Change button to send the new setting to the DMXPlayBack.

Note: The switch function is triggered by making an electrical connection between Pin4 (Switch) and Pin1 (Ground) of the DMX In connector on the rear of the DMXPlayBack.

Capture and Edit Scenes

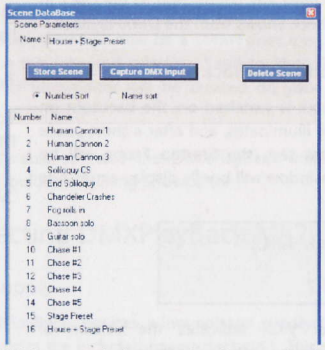
The data appearing at the DMX In port may be captured and saved by opening the *Scene DataBase* window and clicking on the *Capture DMX* Input button. The text on the button will flash momentarily whilst the DMX512 snapshot is being processed.

The message *"DMX captured"* will be displayed in the status window near the top of the screen and the *DMX Output* window will display the levels in the captured Scene.

The Scene will also be transmitted from the DMX Out port on the DMXPlayBack Mk2.

Storing a Scene

The *Store Scene* button writes the Scene currently displayed



in the *DMX Output* window, to the Scenes database. Each Scene is assigned a sequential number by ShowEditor as it is created.
The name assigned to the Scene is the text currently in the Name box. If that name has already been used, a prompt will appear asking if you want to overwrite the current Scene with that name.
By selecting YES the contents of the DMX Output window will replace the existing Scene of that name. Selecting NO will create a new scene with a different number, but the same name. Although a Scene name may contain up to 48 characters, only the first 16 characters are displayed in the LCD status window of the DMXPlayBack.

Renaming a Scene

To rename a Scene, right-click on the Scene name in the Scene DataBase list and enter the new name into the text box.

Modifying an existing Scene

- Select the Scene to edit from the Scene DataBase list. The contents of the Scene will be displayed in the DMX Output window and transmitted from the DMX Out port on the DMXPlayBack. This enables live scene editing.
- Modify the channel levels of the Scene (see below).

ENTTEC
Quick Start Manual
MANUAL-PLAYBACK-MK2
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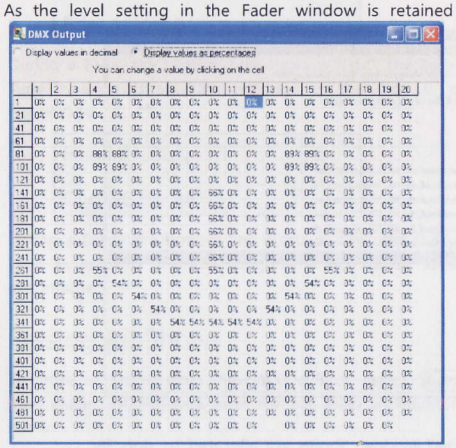
- Select Store Scene, then YES when prompted for permission to overwrite the existing scene.

The modified version of the Scene will automatically replace all instances of that Scene in the current Show.

Modifying channel levels

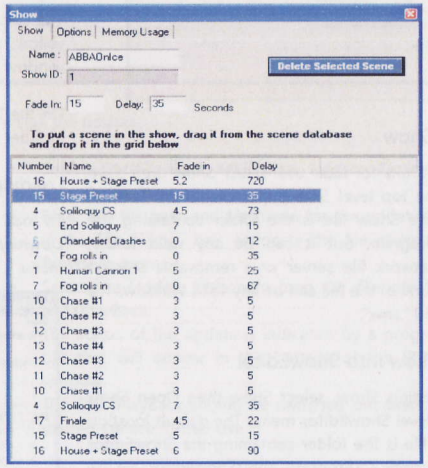
The level of any DMX channel can be changed at any time by double-clicking on the current level in the DMX Output window. When the Fader window appears, the level may be set by either moving the slider to the required level or entering a new decimal DMX level (0-255) into the Level box.
As the level setting in the Fader window is retained



between appearances, several channels can be set to the same level, by double-clicking on each channel in turn, then clicking on the level slider to move the channel to the indicated level.
Note: Although changed levels are both displayed in the DMX Output window and transmitted from the DMXPlayBack, they are not actually stored in the Scenes database or the Show unless the Store Scene button has been pressed.

Creating a Show

A DMXPlayBack Show is a sequence of Scenes separated by Delay times. The transition between successive Scenes is a timed Fade.
To create a new blank Show, select *Show* then *New Show* from the top level *ShowEditor* menu. The Show window will be opened and a Show ID number will be allocated automatically by ShowEditor.


Show
Show
Options
Memory Usage
Name: ABBAOnlce
Show ID: 1
Delete Selected Scene
Fade In: 15
Delay: 35
Seconds
To put a scene in the show, drag it from the scene database and drop it in the grid below
Number Name Fade in Delay
16 House + Stage Preset 5.2 720
15 Stage Preset 15 35
4 Soliloquy CS 4.5 73
5 End Soliloquy 7 15
6 Chandelier Crashes 0 12
7 Fog rolls in 0 35
1 Human Cannon 1 5 25
7 Fog rolls in 0 67
10 Chase #1 3 5
11 Chase #2 3 5
12 Chase #3 3 5
13 Chase #4 3 5
12 Chase #3 3 5
11 Chase #2 3 5
10 Chase #1 3 5
4 Soliloquy CS 7 35
17 Finale 4.5 22
15 Stage Preset 5 15
16 House + Stage Preset 6 90

A name for the Show (up to 10 characters in length) may be entered into the Name box. This will be used as the default Show file name and will be displayed in the LCD status window of the DMXPlayBack.

Adding Scenes to a Show

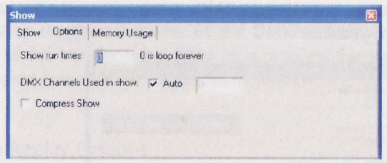
Scenes are added to a Show by clicking on them in the Scene DataBase window, then dragging them into the Show window and dropping them on the required point in the Show sequence. The levels in the Scene will be shown in the DMX Output window and transmitted by the DMXPlayBack.
Any Scene may be added to a Show any number of times.
A Show may contain up to 65,535 Scenes.

Setting Fade and Delay times

Delay and Fade times are set by selecting a Scene in the Show window, then entering the required times into the Fade In and Delay boxes. Times may be any duration from 0 seconds to 6000 seconds (100 minutes) in steps of 0.1 seconds. Longer Delay (or Fade) times can be achieved through repetitions of a Scene.

Show Options

The Show Options window defines how the DMXPlayBack handles replaying a Show



Saving the Show

To retain the Show for later use, select *Show* then *Save Show* from the top level ShowEditor menu. The default location for the Show file is the folder containing the ShowEditor program, but it can be any valid folder, including a network file server or a removable storage device. The name of the file can be any valid Windows file name ending in ".shw".

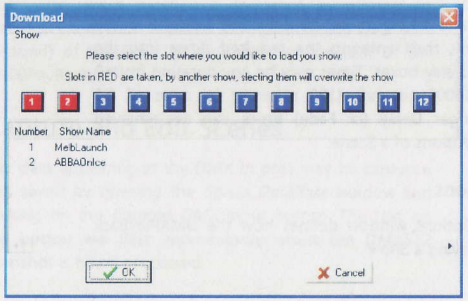
Loading a Show into ShowEditor

To use an existing Show, select Show then Open Show from the top level ShowEditor menu. The default location for the Show file is the folder containing the ShowEditor program (normally C:\Program Files\ShowEditor MK2\), but it can be any valid folder, including a network file server or a removable storage device.
When launched, ShowEditor automatically attempts to load the file "show.shw" from the ShowEditor folder.

Loading Shows into DMXPlayBack

The DMXPlayBack has storage slots for up to 12 Shows. To load the current Show, select the *Download Show* button in the main ShowEditor window or *Show* then *Download Show* from the top level menu. Once ShowEditor has read the current status, the *Download* window will open.

A list of the currently loaded Shows is displayed, together with a row of 12 slot allocation buttons. (Slots in use have a red button.) Selecting one of these buttons allocates the memory slot into which the current Show will be loaded.

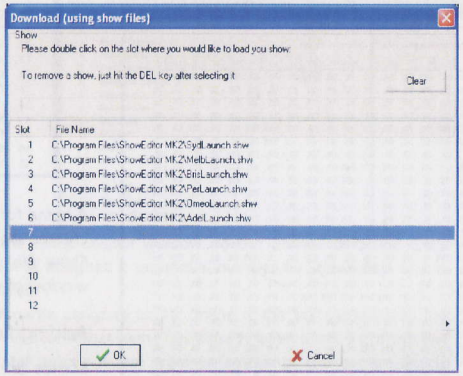

Download
Show
Please select the slot where you would like to load you show
Slots in RED are taken, by another show, slecting them will overwrite the show
1 2 3 4 5 6 7 8 9 10 11 12
Number Show Name
1 MelbLaunch
2 ABBAOnIce
OK
Cancel

The colour of the selected slot allocation button changes to yellow, and if the slot is already in use, a confirmation window will open, asking for confirmation to overwrite.

On the DMXPlayBack, the LCD status screen will display the number of Shows stored in its memory.

Loading multiple shows

To load up to 12 Shows simultaneously, select *Show* then *Download Multiple Shows* from the top level ShowEditor menu.



In the *Download* window, Shows are allocated to slots by selecting the slot number, then double-clicking on it to bring up a the Show file selection window. The default location for selecting Show files is the folder containing the ShowEditor program (normally *C:\Program Files\ShowEditor MK2*), but it can be any valid folder, including a network file server or a removable storage device such as a flash memory device or a portable media player.

All slot allocations may be cleared at once with the *Clear* button. Individual slot allocations may be cleared with the *Del* key or modified by double-clicking on the slot number and selecting a different Show file.

After selecting the *OK* button, the selected Show files are successively downloaded into DMXPlayBack. The status of each Show transfer is indicated by a progress bar that will appear in the bottom of the Status window.

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Quick Start Manual
MANUAL-PLAYBACK-MK2

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Monitoring Show playback

The LCD status screen on the DMXPlayBack displays full details of the Show currently being played.

```
ABBAonIce
Fde: 11.5s  75%
```

The top line of the window displays the name of the Show, alternating every two seconds with the name of the current Scene.

```
House + Stage Pr
Fde: 11.5s  91%
```

During a Fade, the bottom line displays "Fde", the Fade Time in seconds and the progress of the fade as a percentage.

```
House + Stage Pr
Dly:120.0s  18%
```

During a Delay the bottom line displays "Dly", the Delay Time in seconds and the progress of the delay as a percentage.

Erasing All Shows

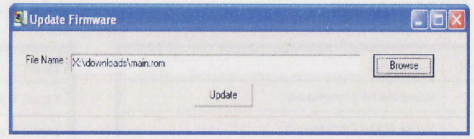
To erase all Shows from the DMXPlayBack, select *Show* then *Erase DMXPlayBack* from the top level ShowEditor menu.

When erasure is complete, the LCD status window on the DMXPlayBack will display:

```
Memory empty
```

Updating Firmware

From time to time new versions of the firmware (internal operating software) for the DMXPlayBack MK2 may become available, to add features or fix an operational problem that has been discovered. Updates are made available from the Downloads section at www.enttec.com/dmxplayback
After checking that the firmware available from the ENTTEC website has a higher version number than that currently installed in the DMXPlayBack MK2 download it and extract the file main.rom from the Zip archive.



To install the update:

- Select *DMXPlayBack MK2* then *Update Firmware*, from the main menu.
- Enter the file path and file name for the update file in the File Name box, or locate the file using the Browse button.
- Select the Update button to load the file into the DMXPlayBack.
- The status of the update is indicated by a progress bar that will appear in the bottom of the Status window.
- The DMXPlayBack should be switched off, then re-started, before further use.

DMX Connector pin out

5pin DMX OUT:

- Pin 1: Ground
- Pin 2: Data -
- Pin 3: Data +
- Pin 4: NC
- Pin 5: NC

5pin DMX IN:

- Pin 1: Ground
- Pin 2: Data -
- Pin 3: Data +
- Pin 4: *Switch
- Pin 5: NC

The *Switch function is activated by making an electrical connection between Pin 4 (Switch) and Pin 1 (Ground) of the DMX Input.

RS232 Commands

Command	Function
D	Read RAM Command
W	Write RAM Command
V	Version Command
X	DMXBuff Command
F	Fade Command
E	EEProm Command
H	Show Command
Z	Reset Command
C	DMX Read Command
J	Jump Scene Command
R	Set Speed Command
L	Load Scene Command (V2.22)

Every function on the DMXPlayBack, including starting and stopping Shows, capturing Scene snapshots and loading Show files can be controlled via the RS232 serial port.

The complete RS232 protocol definition document is available from the Downloads section on ENTTEC website at www.enttec.com/dmxplayback

DMXPlayBackRemote

Using Enttec's DMXPlayBackRemote unit (sold separately), Shows loaded in a DMXPlayBack may be triggered by:

- Pressing a button combination on the front panel (all 12 Shows)
- Pressing a button combination on an infrared remote control (all 12 Shows)
- Closing a switch between terminals on the remote triggering connector (Shows 1-6 only)

Specifications

Item	Value
Input Voltage	110v-240v AC
Input Frequency	50/60Hz
Weight	1.65 lbs / 0.75 kg
Shipped Weight	3.19 lbs / 1.45 kg
Length	7.53" / 191mm
Width	4.14" / 105mm
Height	1.75" / 44.45mm
Op Environment	0°-50°C
Connectors	1x 5-Pin Male XLR for DMX input 1x 5-Pin Female XLR for DMX output 1x RS232 Female Connector

Ordering Information

DMXPlayBack Mk2 and related products can be ordered from our website or through your ENTTEC dealer using the following part numbers.

Part Number	Description
70014	DMXPlayBack Mk2
70027	DMXPlayBackRemote
70029	5-pin to 3-pin DMX Adapter
70006	2U 19" Rack Mount Kit
70035	1U 19" Rack Mount Kit
70013	USB to RS232 adapter
79134	5m 5-pin DMX Cable

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